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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/783,345	02/20/2004	Addison Chen	SPL3004P2	7694

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Zilka-Kotab, PC
P.O. BOX 721120
SAN JOSE, CA 95172-1120

EXAMINER

ALPHONSE, FRITZ

ART UNIT	PAPER NUMBER
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2133

DATE MAILED: 11/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/783,345

Applicant(s)

CHEN, ADDISON

Examiner

Fritz Alphonse

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>11, 12, 13</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 1 is objected to because of the following informalities: Please change in line 4 of claim one "the number of data blocks" to---a number of data block---. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 recites the limitation "The method of claim 1 wherein said steps of:" It is not clear to what it meant by wherein said steps of:

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tarrab (U.S. Pat. No. 5,195,093) in view of Yang (U.S. Pat. No. 6,701,478).

As to claim 5, Tarrab (figs. 3-6) discloses a system for generating CRC values in a Data Transmission System having data bus (25) adapted for handling a plurality of data blocks in

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parallel (col. 3, lines 54 through col. 4 line 4), said system including a memory (24) for storing data blocks, said memory adapted to output a plurality of data blocks (col. 5, lines 39-56). Tarrab discloses a data bus (25) coupled to memory (24), said data bus (25) providing a data path wide enough to accommodate said plurality of data blocks; and a first multiplexer (64) coupled to said CRC cores for selecting the output of one of said CRC cores based on the number of data blocks output on said data bus (figs. 4, 6; col. 7, lines 4-44; col. 10, lines 4-57).

Tarrab does not explicitly disclose a plurality of CRC cores coupled to a data bus.

However, in the same field of endeavor, Yang discloses a CRC value using a plurality of CRC generators operating in parallel including a plurality of CRC cores coupled to a data bus (fig. 4; col. 6, lines 1-6).

Therefore, it would have been obvious to a person of ordinary skill in the art, at the time of the invention was made, to combine Tarrab's CRC error-generation apparatus, as disclosed by Yang. Doing so would provide a technique for preserving the integrity of a frame (or packet) that is being propagated from a data source to a data destination (col. 1, lines 21-23).

As to claims 6-8, Tarrab discloses a plurality of CRC cores that include a CRC core for calculating a CRC value for every combination of data blocks on said Data Bus (col. 5, lines 3-23); the system includes a second multiplexer coupled to the output of said first multiplexer for initializing said CRC cores with a seed value for use in calculating said CRC value (col. 10, lines 32-57); the CRC value is calculated according to a predetermined algorithm and is based on said seed value and the data in said data blocks (table 1; col. 9, lines 14-33).

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As to claims 9-11, Tarrab (figs. 2-5) discloses a system including means for appending said CRC value to said data segment; said CRC value has the same granularity as said data blocks; said memory includes a non-volatile data storage device (col. 9, lines 34-50).

As to claim 12, Tarrab (figs. 3-6) show a circuit for calculating CRC values including a memory (24) for storing data blocks, said memory including a plurality of outputs for simultaneously outputting data segments having a plurality of data blocks (col. 5, lines 39-56); a data bus (25) coupled to said memory (24), said data bus having a data path for each of said data blocks. Tarrab discloses a plurality of registers (see figure 3, 30-35) coupled to said data bus (25) said registers for temporarily storing data blocks within a data segment output from said memory, wherein said registers are adapted for storing any combination of data blocks within said data segment (col. 5, lines 39-56). Tarrak discloses a CRC cores coupled to respective registers (see figure 3); and a multiplexer (64) for selecting the CRC value calculated by one of said CRC cores, based on which of said plurality of registers contain valid data (figs. 4, 6; col. 7, lines 4-44; col. 10, lines 4-57).

Tarrab does not explicitly disclose a plurality of CRC cores. However, the limitation is obvious and well known in the art, as evidenced by Yang (fig. 4; col. 6, lines 1-6). See the motivation for the same reason disclosed in claim 5 above.

As to claim 1, method claim 1 corresponds to apparatus claim 5; therefore, it is analyzed as previously discussed in claim 5 above.

As to claim 2, Tarrab discloses a method for calculating a CRC value for each possibility of the plurality of data blocks containing valid data; and selecting a correct calculated CRC value based on the number of said data blocks (col. 5, lines 39-56).

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As to claims 3-4, Tarrab discloses a method, wherein calculated CRC values are variable between a value based on a data block single block up to a value based on a group of said data blocks; the segment includes at least one data block (fig. 3; col. 6, lines 19-45).

6. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tarrab in view of Meyer (U.S. Pat. No. 5,953,352).

As to claim 13, Tarrab discloses a method for calculating cyclical redundancy check (CRC) values, comprising: receiving data (col. 4, lines 5-27); and appending said CRC value to said data (col. 5, lines 24-38).

Tarrab does not explicitly disclose a method calculating a CRC value in accordance with a predetermined algorithm, utilizing a transport offload engine (TOE).

However, in the same field of endeavor, Meyer discloses a method of checking data integrity in a computer system which calculates a CRC value in accordance with a predetermined algorithm, utilizing a transport offload engine (col. 4, lines 13-33).

Therefore, it would have been obvious to a person of ordinary skill in the art, at the time of the invention was made, to improve upon the checking data integrity in a computer system, as disclosed by Meyer. Doing so would help to maintain data integrity as well as performance in a communication system.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks, Washington, D.C. 20231

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or faxed to: (703) 872-9306 for all formal communications.

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Fourth Floor (Receptionist).

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fritz Alphonse, whose telephone number is (571) 272-3813. The examiner can normally be reached on M-F, 8:30-6:00, Alt. Mondays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert De Cady, can be reached at (571) 272-3819.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Information regarding the status of an application may also be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Fritz Alphonse

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October 25, 2005

ALBERT DECADY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100